DOCUMENT RESUME

ED 299 317 TM 012 223

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TITLE R&D Funding: The Department of Education in Perspective. Report to the Chairman, Subcommittee on Select Education, Committee on Education and Labor, House of Representatives.
INSTITUTION General Accounting Office, Washington, DC. Program Evaluation and Methodology Div.
REPORT NO GAO/PEMD-88-18FS
PUB DATE May 88
NOTE 18p.
AVAILABLE FROM U.S. General Accounting Office, P.O. Box 6015, Gaithersburg, MD 20877 (first 5 copies free; additional copies $2.00 each; 100 or more--25% discount).
PUB TYPE Reports - Evaluative/Feasibility (142) -- Statistical Data (110)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Budgets; Educational Finance; Educational Research; *Federal Aid; *Financial Support; Program Budgeting; Program Evaluation; Public Agencies; Research Administration; *Research and Development; Resource Allocation; *Trend Analysis
IDENTIFIERS *Department of Education; *Educational Information; Fact Sheets

ABSTRACT

This fact sheet compares the history of fiscal resources for research and development in the Department of Education with budget histories of research and development in other departments and agencies of the Federal Government. The correspondence between administration budget requests and congressional appropriations for education research and statistics is also described. Data for the fact sheet were complied from General Accounting Office and departmental documents, supplemented by interviews with agency officials. Analyses cover selected years between 1978 and 1988, primarily 1980 to 1987. Six graphs and eight data tables are provided. (SLD)

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United States General Accounting Office

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Report to the Chairman, Subcommittee on Select Education, Committee on Education and Labor, House of Representatives

ED299317

May 1988

R&D FUNDING

The Department of Education in Perspective

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United States
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Washington, D.C. 20548

Program Evaluation and
Methodology Division

B-226398

May 13, 1988

The Honorable Major Owens, Chairman
Subcommittee on Select Education
Committee on Education and Labor
House of Representatives

Dear Mr. Chairman:

As you requested in November 1987, this fact sheet provides two types of information. First, we compare the history of fiscal resources for research and development in the Department of Education with budget histories of research and development in other departments and agencies. As requested, we have disaggregated information for defense-related and nondefense-related agencies. We have also included comparisons of budget resources for the Department of Education's statistics and evaluation functions with resources available for similar activities in other departments and agencies. Second, we describe the correspondence between administration budget requests and congressional appropriations for education research and statistics. Data for this fact sheet were compiled from our documents and executive agency and congressional documents, and they were supplemented by interviews with agency officials when clarification was necessary. Our analyses cover selected years between 1978 and 1988.

As you requested, we did not obtain formal agency comments. As agreed with your office, we plan no further distribution until 10 days after the issue date, unless you publicly announce the contents earlier. We will then send copies to others who are interested and make copies available to others who request them. Further information can be obtained by calling me at 275-1854 or Lois-ellin Datta at 275-1370.

Sincerely yours,

Eleanor Chelimsky
Director

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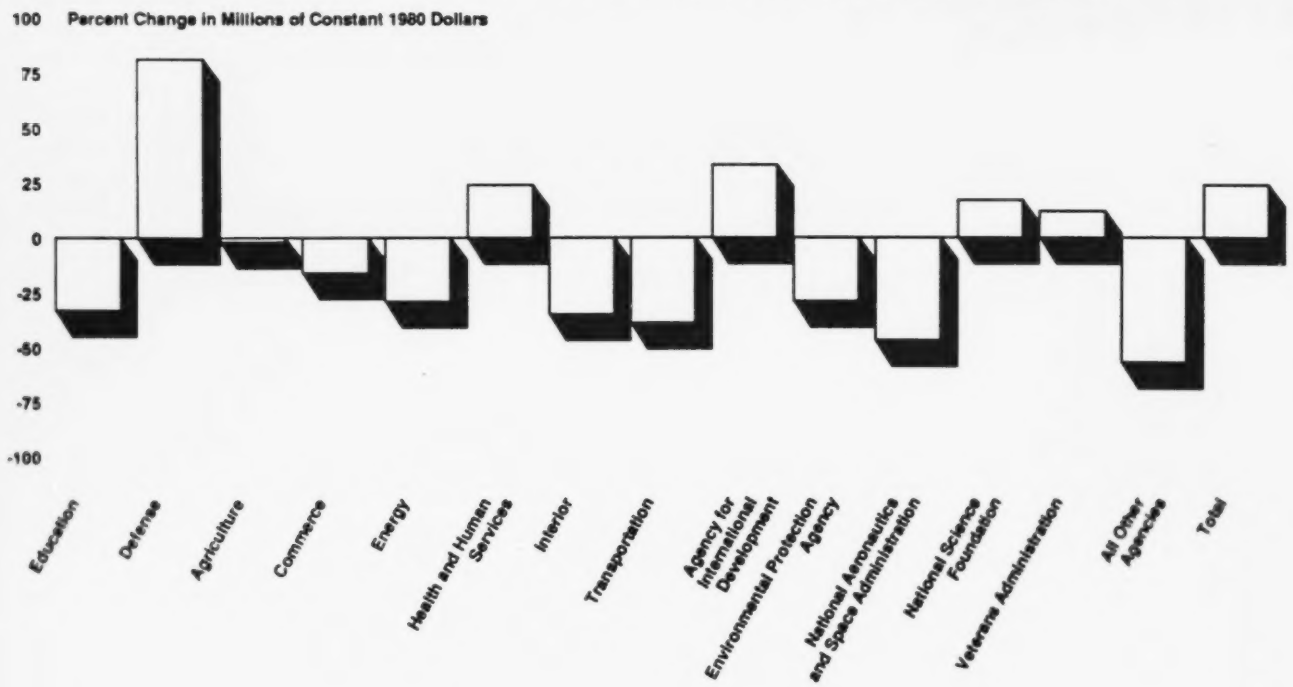
The Funding of Research and Development in Major Departments and Agencies

Changes in Funding

Across the federal government, between fiscal years 1980 and 1987, agencies overall experienced an increase in budget obligations for research and development (excluding capital investments) of 24 percent in constant 1980 dollars.[1]

However, as shown in figure 1.1 and table 1.1, there was considerable variation among departments and agencies in the fiscal resources available to them individually for research and development.

Figure 1.1: Change in Budget Obligations for Research and Development by Major Department and Agency 1980-87[a]



[a]See notes for table 1.1

[1]Research and development budget figures used in this fact sheet refer to funds for conducting research and development only; capital investments for facilities are not included. Data reported here summarize research and development activities in all topic areas; coverage is not limited to education-related research and development. All years are fiscal years unless noted otherwise.

Table 1.1: Budget Obligations for Research and Development by Major Department and Agency 1980 and 1987[a]

Department or agency	1980	1987 Current	1987 Constant 1980[b]	Real change 1980-87
Education	$132	$124	$88	−33%
Defense	13,943	36,088	25,236	+81
Agriculture	687	946	671	−2
Commerce	341	405	287	−16
Energy	4,737	4,724	3,350	−29
Health and Human Services	3,790	6,643	4,711	+24
Interior	438	403	286	−35
Transportation	374	322	228	−39
Agency for International Development	119	223	158	+33
Environmental Protection Agency	348	348	247	−29
National Aeronautics and Space Administration	5,084	3,787	2,686	−47
National Science Foundation	888	1,464	1,038	+17
Veterans Administration	133	210	149	+12
All other agencies	669	404	287	−57
Total	**$31,682**	**$56,089**	**$39,424**	**+24%**

[a]Dollars are for fiscal years in millions. Does not include departments or agencies with research and development budget obligations of less than $10 million. Total may not add because of rounding.

[b]Constant 1980 dollars were calculated by using fixed-weighted price indexes for federal government purchase of services in defense or nondefense sectors, as appropriate. Indexes were obtained from the Bureau of Economic Analysis in the Department of Commerce.

Source: Office of Management and Budget, Special Analyses, Budget of the United States Government (Washington, D.C., 1981), and other data provided by the Office of Management and Budget.

Eight major departments and agencies showed real decline in budget obligations, ranging from 2 percent to 47 percent. The Department of Education showed a 33-percent reduction.

Five major agencies exhibited increases. These were led by the Department of Defense, which displayed a real growth of 81 percent in funding for research and development.

Relative Size of the Effort

Variation is also shown in the size of the research and development function when agencies are compared. As table 1.1 shows, for example, this activity in the Department of Education was funded for fiscal year 1987 with $124 million (in current dollars), accounting for 0.2 percent of total federal obligations for conducting research and development. In contrast, the Department of Defense research and development budget

was $36.1 billion in fiscal year 1987, or 64 percent of the federal total. In 1980, it represented 44 percent of the federal total.

The Magnitude of Decreases

For departments and agencies that experienced reductions in funding, $4.7 billion (in constant 1980 dollars) would have been necessary to restore 1987 funding to the 1980 levels. This represents roughly 41 percent of the Department of Defense real increase of $11.3 billion. The $44 million decrease in funding for the Department of Education represents 0.4 percent of the Defense Department's increase.

Trends in Obligations

Figure 1.2 displays the recent trend in research and development obligations, comparing levels for Department of Defense functions with those for other agencies, excluding Education. Since 1983, defense obligations have exceeded those for the other agencies combined, and the gap between these two areas of spending has grown each year since 1982. Table 1.2 contains data supporting figure 1.2.

Table 1.2: Budget Obligations for Research and Development in Defense and Other Agencies 1980-87[a]

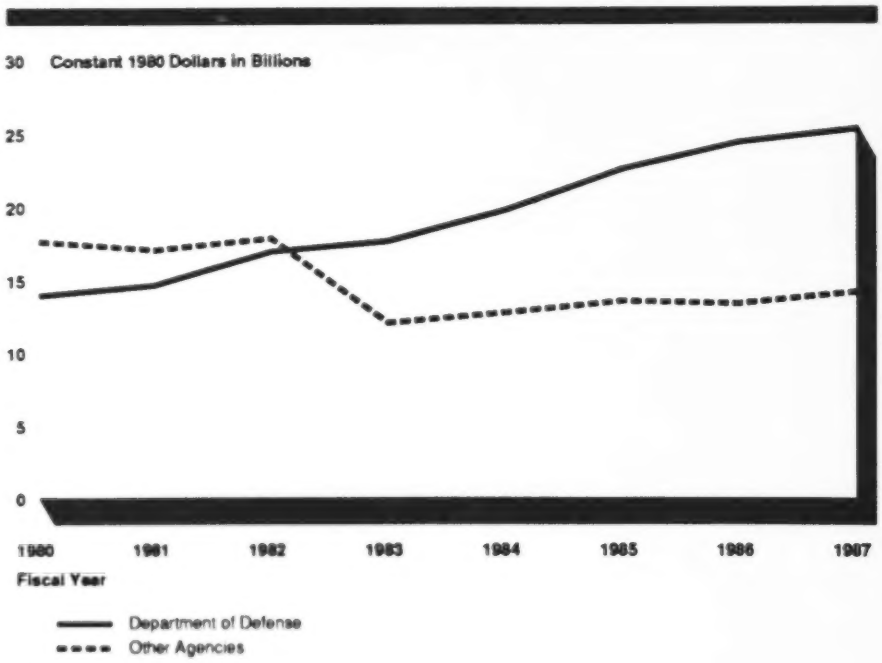
	Department of Defense		Other agencies[b]	
Fiscal year	Current	Constant 1980	Current	Constant 1980
1980	$13.943	$13.943	$17.607	$17.607
1981	16.226	14.618	18.859	16.990
1982	20.033	16.420	21.547	17.807
1983	22.925	17.635	15.257	12.014
1984	26.408	19.708	16.665	12.721
1985	31.099	22.536	18.280	13.351
1986	34.205	24.259	18.290	13.254
1987	36.088	25.236	19.878	14.098

[a]Dollars in millions

[b]Includes all other agencies except the Department of Education

Source: The Office of Management and Budget and price indexes reported by the Bureau of Economic Analysis in the Department of Commerce

Figure 1.2: Trends in Budget Obligations for Research and Development in Defense and Other Agencies 1980-87[a]



[a]See notes for table 1.2

Education

Budget obligations for conducting research and development in the Department of Education from 1980 to 1987 are shown in figure 1.3 and table 1.3.[a] Funding for this activity peaked at $154 million in 1982. The budget was sharply cut for fiscal year 1983 to $103 million, a reduction of 36 percent in constant dollars, and has yet to be restored to the 1982 level. The 1987 constant dollar level of $88 million in obligations marks a 33-percent reduction from 1980.

[a]Data for the Department of Education describe funding for research and development throughout the department. Budget figures shown here are larger, therefore, than those for the department's office of educational research and improvement.

Table 1.3: Budget Obligations for Research and Development in the Department of Education 1980-87[a]

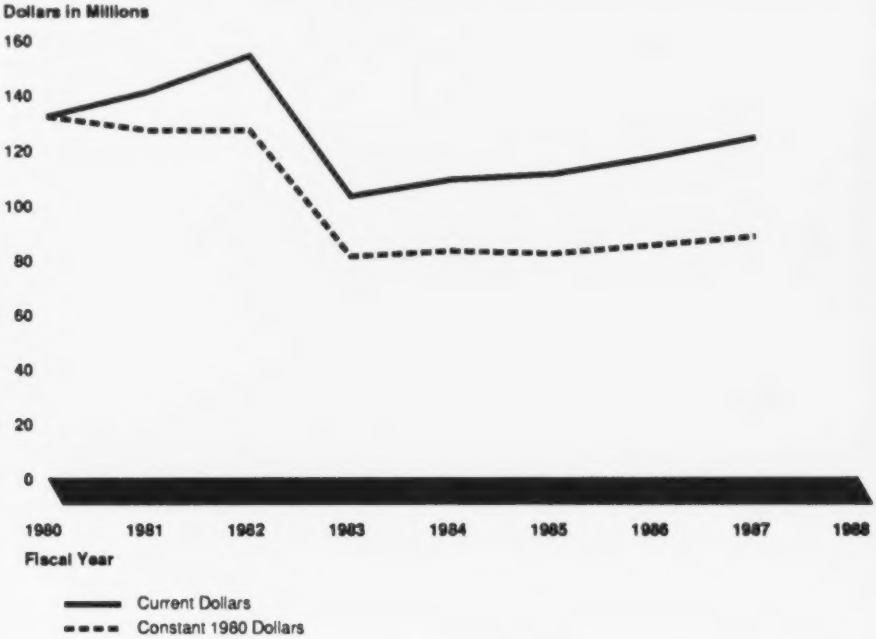
Fiscal year	Current	Constant 1980[b]
1980	$132	$132
1981	141	127
1982	154	127
1983	103	81
1984	109	83
1985	111	82
1986	117	85
1987	124	88

[a]Dollars are in millions and include research and development only. Table does not include support of facilities.

[b]Constant dollars are calculated by using the fixed-weighted price index for federal nondefense purchase of services other than employee compensation.

Source: The Office of Management Budget and price indexes reported by the Bureau of Economic Analysis in the Department of Commerce.

Figure 1.3: Trends in Budget Obligations for Research and Development in the Department of Education 1980-87[a]

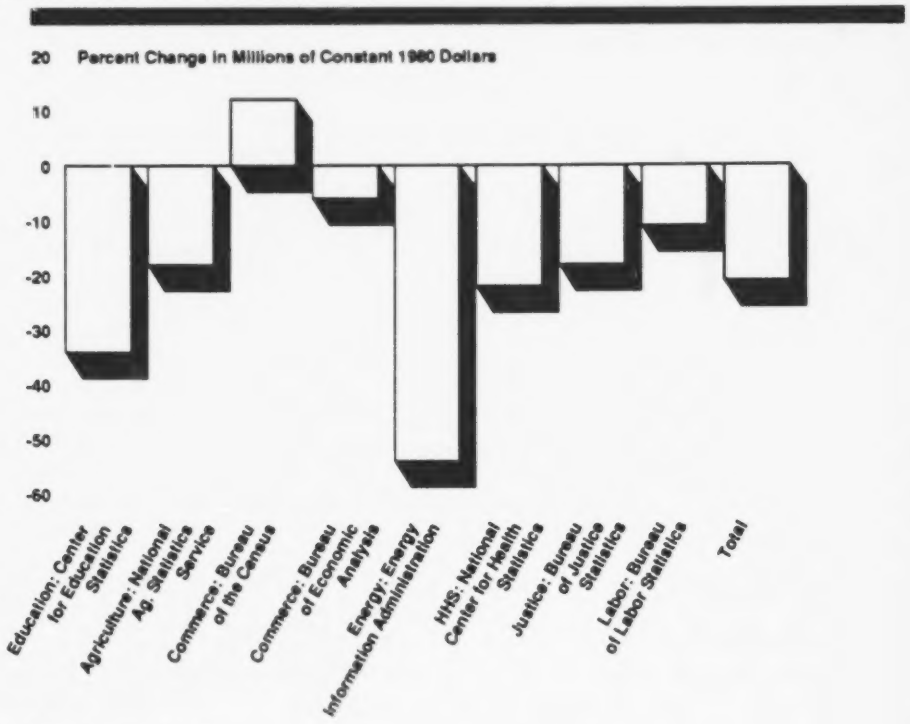


[a]See notes for table 1.3.

Funding of Major Statistical Units

Major statistical units overall experienced a real decline of 21 percent in budget authority between 1980 and 1986. See figure 2.1 and tables 2.1 and 2.2.

Figure 2.1: Change in Budget Authority for Major Statistical Units 1980-86[a]



[a]See notes for table 2.1

Table 2.1: Budget Authority for Major Statistical Units 1980 and 1986[a]

Statistical unit	1980	1986 Current[b]	1986 Constant 1980	Real change 1980-86
Education				
Center for Education Statistics[c]	$14.9	$14.0	$9.9	−34%
Agriculture				
National Agricultural Statistics Service[d]	49.0	57.2	40.3	−18
Commerce				
Census Bureau[e]	53.7	85.8	60.4	+12
Bureau of Economic Analysis[d]	15.8	21.1	14.9	−6
Energy				
Energy Information Administration	90.8	58.9	41.5	−54
Health and Human Services				
National Center for Health Statistics	43.3	48.0	33.8	−22
Justice				
Bureau of Justice Statistics	16.3	19.1	13.4	−18
Labor				
Bureau of Labor Statistics[f]	102.9	129.5	91.2	−11
Total	**$386.7**	**$433.6**	**$305.4**	**−21%**

[a]Dollars are for fiscal years in millions.

[b]Figures for 1986 are administration requests.

[c]Includes program funding, salaries, and expenses from other accounts.

[d]Formerly the Statistical Reporting Service.

[e]Includes current programs only. Does not include transfers from other agencies.

[f]Excludes transfers from other agencies and activities to revise the consumer price index.

Source: U.S. House of Representatives, Committee on Government Operations, An Update on the Status of Major Federal Statistical Agencies, Fiscal Year 1986 (Washington, D.C.: U.S. Government Printing Office, 1985), p. CRS-6.

Table 2.2: Budget Authority for Major Statistical Units 1978-86[a]

Unit	1978	1979	1980	1981	1982	1983	1984	1985	1986
Bureau of the Census current programs excluding transfers	$54.8	$54.8	$53.8	$49.5	$46.9	$52.7	$57.6	$60.8	$60.4
Bureau of Economic Analysis excluding transfers	16.2	15.8	15.8	14.8	14.8	15.0	15.5	15.9	14.9
Bureau of Justice Statistics[b]			16.3	12.2	12.7	13.0	13.9	14.0	13.4
Bureau of Labor Statistics excluding transfers and consumer price index	96.5	101.7	102.9	96.1	92.6	95.7	97.7	101.5	91.2
Center for Education Statistics[b]	21.5	16.5	14.9	12.5	11.8	11.3	10.7	10.3	9.9
Energy Information Administration			90.8	78.2	64.6	44.3	43.2	44.3	41.5
National Agricultural Statistics Service, USDA	46.4	46.5	49.0	46.5	42.3	40.7	41.7	41.7	40.3
National Center for Health Statistics	43.8	41.7	43.3	32.8	31.3	32.3	35.2	31.3	33.8
Total			**$386.8**	**$342.6**	**$317.0**	**$305.0**	**$315.5**	**$319.8**	**$305.4**
Deflator	0.87	0.93	1.00	1.16	1.22	1.27	1.31	1.36	1.42

[a]In millions of 1980 constant dollars. Years are fiscal years.

[b]Includes program funding, salary, and expenses from other accounts. Therefore, does not match published data that refer only to program funding.

. Data not available.

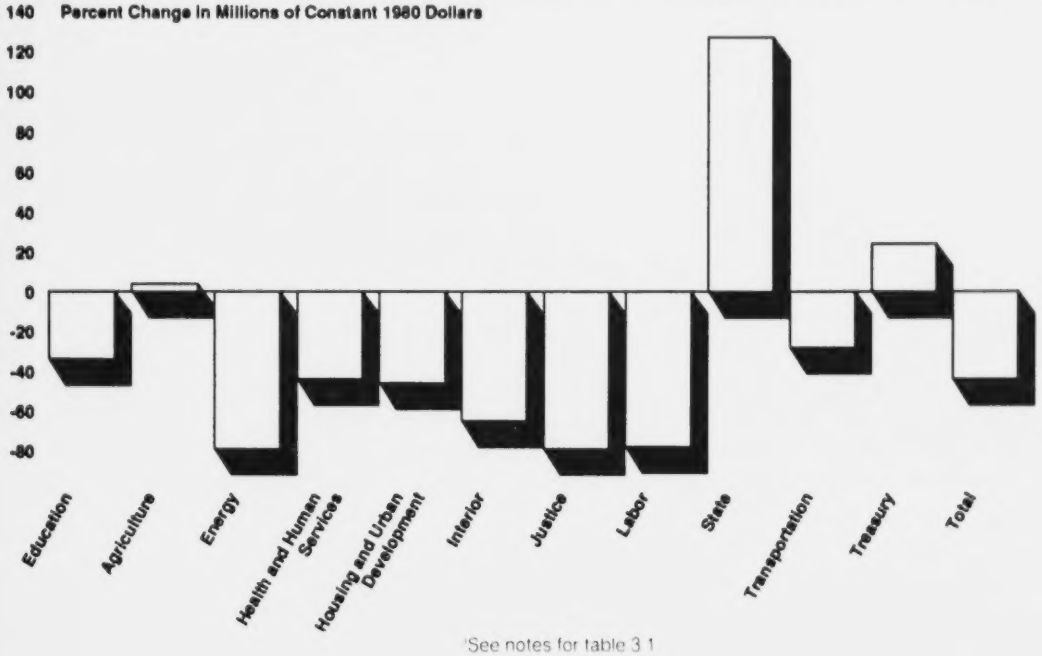
Source: U.S. House of Representatives, Committee on Government Operations, An Update on the Status of Major Federal Statistical Agencies, Fiscal Year 1986 (Washington, D.C., 1985).

As with overall research and development funding, notable variations may be observed among individual units. One organization experienced an increase: 12 percent for the Bureau of the Census. Seven others experienced declines ranging from 6 to 54 percent. The Center for Education Statistics showed a reduction in budget authority from $14.9 million in 1980 to $9.9 million in 1986, a 34-percent reduction in constant dollars.

Funding of Evaluation Units

Program evaluation activities also have experienced a reduction in available fiscal resources, as shown in figure 3.1 and table 3.1. Among evaluation units in the departments, aside from the Department of Defense, fiscal resources in 1984 (the latest year for which we have data) were 44 percent lower than the overall level for these departments in 1980.

Figure 3.1: Change in Fiscal Resources for Evaluation Units in Nondefense Departments 1980 and 1984[a]



[a]See notes for table 3.1

Table 3.1: Fiscal Resources for Evaluation Units in Nondefense Departments 1980 and 1984[a]

Department	1980	1984 Current	1984 Constant 1980[b]	Real change 1980-84
Education	$23.9	$20.6	$15.7	−34%
Agriculture	17.8	24.4	18.6	+4
Energy	4.3	1.2	0.9	−79
Health and Human Services	39.1	28.5	21.8	−44
Housing and Urban Development	11.3	8.0	6.1	−46
Interior	6.3	2.9	2.2	−65
Justice	16.8	4.6	3.5	−79
Labor	20.6	5.9	4.5	−78
State	1.5	4.5	3.4	+127
Transportation	3.6	3.4	2.6	−28
Treasury	2.9	4.7	3.6	+24
Total	**$148.1**	**$108.7**	**$82.9**	**−44%**

[a]Dollars are for fiscal years in millions. Data are based on estimates reported by evaluation units late in each of the 2 fiscal years. Estimates include total resources, regardless of funding source or fiscal year in which funds were obligated. The Department of Commerce is not included because it reported no evaluation units in 1984; fiscal resources for the department's evaluation units in 1980 were reported as $13.0 million. Data from the Department of Defense are not available.

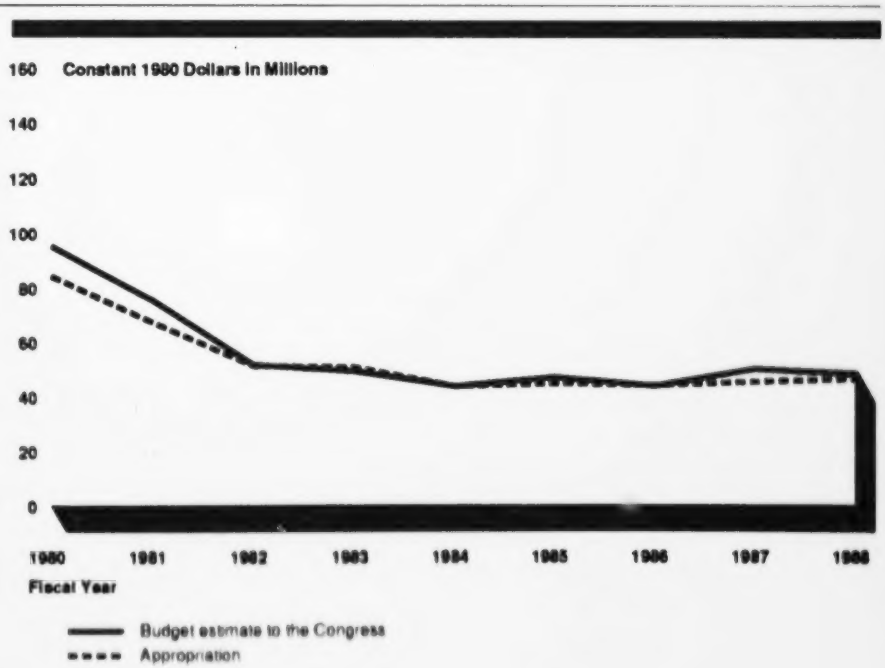
[b]Constant 1980 dollars were calculated by using the fixed-weighted price index for federal government nondefense purchase of services other than employee compensation. This is a more accurate index than the one available for our report entitled Federal Evaluation: Fewer Units, Reduced Resources, Different Studies From 1980, GAO/PEMD-87-9 (Washington, D.C.: January 1987). The difference in results, however, is not large. The total percentage change in fiscal resources presented in that report was −41 percent rather than the −44 percent shown in this table.

Evaluation activities in the departments of agriculture, state, and treasury experienced real increases in funding, but other departments showed reductions. In the Department of Education, the reduction was large—34 percent in constant dollars—but not as large as in several other departments.

Budget Requests and Appropriations for Education Research and Statistics

The pattern of the president's budget estimates and congressional appropriations for the Department of Education's research and statistics budget is presented in figure 4.1 and tables 4.1 and 4.2. Both estimates and appropriations declined steeply between fiscal years 1980 and 1982. Over the 9-year period 1980 through 1988, the appropriation was less than the request for 6 of those years. On these occasions, the differences between the request and the appropriation ranged from approximately $400,000 to $11 million—or from 1 percent to 12 percent of the request. For fiscal years 1984 and 1986, the administration request and the congressional appropriation were identical. For fiscal year 1983, the appropriation exceeded the request; the difference was $1.8 million, or 2.9 percent of the request. There were only 2 years—1985 and 1987—in which the administration asked for increases above the level of the previous year's request. Appropriations exceeded the previous year's appropriation on four occasions: fiscal years 1983, 1985, 1987, and 1988.

Figure 4.1: Budget Requests and Appropriations for Education Research and Statistics 1980-88[a]



[a]See notes for table 4.1

Table 4.1: Education Research and Statistics Budget Requests and Appropriations 1980-88[a]

		Budget estimate to the Congress		Appropriation	
Fiscal year	Price index	Current	Constant 1980	Current	Constant 1980
1980	1.00	$95.120	$95.120	$84.061	$84.061
1981	1.11	84.061	75.731	74.561	67.172
1982	1.21	62.392	51.564	61.979	51.222
1983	1.27	62.392	49.128	64.203	50.554
1984	1.31	56.978	43.495	56.978	43.495
1985	1.35	62.978	46.650	59.978	44.428
1986	1.37	59.978	43.462	59.978	43.780
1987	1.41	70.231	49.809	63.578	45.091
1988	1.46[b]	70.231	48.103[b]	67.526	46.251[b]

[a]Dollars are in millions.

[b]Estimate.

Source: Department of Education research and statistics fiscal year 1988 budget request; U.S. House of Representatives, Making Further Continuing Appropriations for the Fiscal Year Ending September 30, 1988, conference committee report number 100-498 (Washington, D.C.: U.S. Government Printing Office, 1987); and price indexes supplied by the Bureau of Economic Analysis in the Department of Commerce.

Table 4.2: Difference Between Administration Requests and Appropriations: Education Research and Statistics Budget 1980-88[a]

Fiscal year	Difference	Difference as % of request
1980	−$11.059	11.6%
1981	−9.500	11.3
1982	−0.413	0.7
1983	+1.811	2.9
1984	0	0
1985	−3.000	4.8
1986[b]	0	0
1987	−6.653	9.5
1988	−2.705	3.9
Average 1980-88	−3.502	5.0%

[a]All figures are in millions of current dollars. "+" indicates the appropriation exceeded the request; "−" indicates the appropriation was less than the request.

[b]Excludes sequestration of $2.579 million.

Source: Data from the Department of Education research and statistics fiscal year 1988 budget request.

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